AN 1986-255520 [39] WPIDS
DNC C1986-110297
TI High temperature corrosion resistant steel in calcium sulphate environment - comprised carbon, silicon, manganese, chromium, nickel, and iron.
DC M27
PA (SUMQ) SUMITOMO METAL IND LTD
CYC 1
PI JP 61183452 A 19860816 (198639)* 5
ADT JP 61183452 A JP 1985-23905 19850209
PRAI JP 1985-23905 19850209
AB JP 61183452 A UPAB: 19930922
High **Mn** steel comprises, by weight, up to 0.20% **C**, 0.1-2.0 % **Si**, 2.0-7.0% **Mn**, 14-26% **Cr**, 8-30% **Ni** and the balance substantially **Fe.** The steel may contain up to 0.1% in total at least one Y, REM, Mg or Ca to improve the corrosion resistance and/or at least one 0.03-0.40% **N**, 0.05-1.5 Ti, 0.05-1.5% **Nb** or 0.05-1.5% Zr to improve the strength by precipitation hardening of carbonitrides. Further, the steel may contain up to 3% Mo, up to 3% W, up to 3% **V**, up to 7% **Cu**, up to 0.5% **Al**, up to 0.01% B, up to 0.02% P and/or up to 0.05% S. Pref., total contents of **Cr** and Mo is 20% or more.

USE/ADVANTAGE - Used for steel pipes placed in a fluid bed in fluid bed boilers. The high temperature corrosion resistance under conditions attached with CaSO4 is improved by the addition of **Cr** with **Mn.** The addition of **Mn** is effective to depress the formation of sulphides in the steel and improves the corrosion resistance. The additives **Cr** improves the corrosion resistance. The additive **Ni** makes the structure **austenitic.**
0/0

≤ 0.12 C
0.1-2 Si
2-7 Mn
≤ 0.02 P
≤ 0.05 S
14-26 Cr
8-30 Ni
≤ 7 Cu
0.05-1.5 Nb
≤ 3 V
≤ 0.5 Al
0.03-0.4 N
O
Fe

$\leq 0.1\%\ \Sigma$ (Y, REM, Mg, Ca)

0.05-1.5 Ti, ⊠
0.05-1.5 Nb
0.05-1.5 Zr
0.03-0.4 N
} ≥ 1

$\leq 3\%$ Mo
$\leq 3\%$ W
≤ 0.01 B
} ≥ 1